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FREUD'S PSYCHOLOGY.¹

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The difficulties inherent in the subject of an essay are frequently mentioned in the introductory sentences by way of excuse for the deficiencies of the exposition. In the present case they are of so peculiar a nature that to mention them here will also serve another purpose, namely, to indicate some of the general aspects of the subject.

The first difficulty, one that necessarily occurs in presenting the views of any progressive thinker, resides in the fact that Freud's views have in the past twenty years undergone a continuous evolution. Most writers who have expounded them (Jung, Baroncini, Schultz, etc.) have therefore elected to describe them in terms of their historical development, a course which, while lending greater accuracy, has obvious disadvantages, particularly for readers not familiar with the subject. As, however, the later modifications in Freud's views have mainly concerned clinical subjects, such as the ætiology of hysteria and the technique of the psycho-analytic method, with which we are not now concerned, it will here be possible to choose the alternative course

¹ Most of Freud's psychological writings are included in the following books, of which the two marked with an asterisk are in the present connection the most important. *Studien über Hysterie*, 1st ed., 1895; 2d ed., 1909 (with Breuer). * *Traumdeutung*, 1st ed., 1900; 2d ed., 1909. *Psychopathologie des Alltagslebens*, 1st ed., 1901; 3d ed., 1910. * *Drei Abhandlungen zur Sexualtheorie*, 1st ed., 1905; 2d ed., 1910. *Der Witz und seine Beziehungen zum Unbewussten*, 1905. *Sammlung kleiner Schriften zur Neurosenlehre*, 1906. *Sammlung kleiner Schriften zur Neurosenlehre*, 2e Folge, 1909. *Schriften zur angewandten Seelenkunde*, Ht. I., 1908. *Jahrbuch für psychoanalytische und psychopathologische Forschungen*, Bd. I., 1909. Ten articles have been translated by Dr. A. A. Brill in a volume entitled 'Selected Papers on Hysteria and the Psycho-neuroses,' 1909.

of attempting to give a more general review of his psychology as a whole.

The second, and far weightier difficulty, is that Freud's psychology signifies a great deal more than the formulation of a series of new conclusions or the announcement of new discoveries, important as these may be; it involves a radical change in our attitude towards the questions of the structure and functioning of the mind. If, therefore, Freud's views are substantiated by later investigations, they betoken an event of peculiar and far-reaching significance to psychology in general. It is notoriously harder to convey a new attitude or point of view than mere conclusions or even facts, and yet in regard to our judgment it is a more important matter, for a given conclusion that may appear improbable enough from one point of view is seen in quite a different aspect from another. A corollary of this consideration is that Freud has not only dealt with previously discussed questions, *e. g.*, dream interpretation and the psychology of wit, but has explained what previously had hardly been thought to be a problem at all, *e. g.*, the cause of infantile amnesia, the meaning of various absent-minded and other acts in everyday life, etc.

The third difficulty, one really implicit in the last, is that the applications of Freud's psychology are exceedingly diverse, so that the range of subjects included is very extensive. He has, for instance, given explanations for problems so remote from one another as the origin of myths, the choice of a profession, the sources of artistic creativeness, and the tendency to superstitious beliefs. Of only a few of the subjects, however, has he given any complete or systematic exposition, and the extent to which his principles can be applied refers more to deductions, usually fairly obvious, that follow from these. His expositions are thronged with suggestive hints, of which some are more, some less developed, that are at present being acted on and expanded by both himself and the members of his school. Again, the way in which these different subjects are intimately bound up with one another makes it very difficult to present some without the others. Much of the cogency of Freud's arguments is derived from the astonishing confirmation and mutual support that the application of them receives from widely different fields of study, such as psycho-pathology, dreams, wit, mythology and everyday life. Just as the true significance of Darwin's suggestions became evident only when their fruitfulness was realised in such different fields as palæontology, comparative morphology, and embryology, so do Freud's hypotheses become irresistibly convincing when one appreciates their capacity to illuminate spheres

of human activity that at first sight appear to be remote and unconnected. This third difficulty, the extensiveness of Freud's principles, is one reason why the present exposition can be nothing but the roughest and crudest sketch of the subject indicated in the title of this paper.

Freud is primarily a man of science rather than a philosopher. In philosophy he would perhaps most nearly be classified as accepting scientific idealism, as represented by Karl Pearson, with strong sympathies for the Humanism of F. C. S. Schiller. This is well illustrated by his attitude to such a question as the psycho-physical relations of consciousness or of mental processes in general. He uses the term conscious to denote all the mental processes of which a person is aware, distinctly or indistinctly, at a given moment. Not sharply marked off from these are the fore-conscious (*vorbewusste*) memories, of which a person is not at a given moment necessarily aware, but which can be readily and spontaneously recalled. Unconscious memories are those that cannot be spontaneously recalled by the subject, but which can be evoked by the use of special methods (hypnosis, psycho-analysis, etc.).¹ As we shall presently see, Freud holds that processes of the most complex kind may occur without ever becoming conscious. He is content with this practical finding, and leaves quite open the question as to whether they are of a mental or physical nature. Referring, for instance, to the unconscious occurrence of dissociation between an idea and its accompanying affect, he says: "Vielleicht wäre es richtiger zu sagen: Dies sind überhaupt nicht Vorgänge psychischer Natur, sondern physische Vorgänge, deren psychische Folge sich so darstellt, als wäre das durch die Redensarten: Trennung der Vorstellung von ihrem Affekt . . . Ausgedrückte wirklich geschehen." Leaving, however, the philosophical aspects of the subject, he empirically accepts the obvious fact that it is impossible to describe the processes in question except in mental terms, and so continues to treat of them as if they were mental. Another justification for this he sees in the continuity that experience establishes between conscious and unconscious processes, which are related to one another in every respect except in the matter of awareness; the resemblances between them thus far outweigh in importance the differences.

¹ It will be noticed that by definition these resemble Myers' subliminal process, Prince's co-conscious, and Janet's *subconscient*; Sidis' subconscious includes both Freud's unconscious and fore-conscious. There exist, however, fundamental differences between Freud's views on the subject and those of other writers; these have been strikingly discussed in a recent article by Bernard Hart in the *Journal of Abnormal Psychology*, Feb.-March, 1910.

It will be convenient shortly to consider some of Freud's more general and fundamental principles before mentioning their applications. Of these the following seven will be selected, admittedly an arbitrary choice.

1. In the first place Freud attributes to psychical events a rigorous *determinism*, the word being used in its scientific rather than in its philosophic sense. Psychical processes are never isolated or accidental phenomena, but are as precisely related to preceding ones as are successive physical events; there is no more room for 'chance' in the mental world than in the physical one. Starting from this point of view he develops his psycho-analytic method, on which are based practically all his conclusions. He maintains that, when a subject is asked to make free associations from a given theme to which he is attending, and wholly to suspend the active criticism that under such circumstances is instinctively exercised towards the incoming thoughts, the associations must be directly or indirectly related, in a causative manner, to the initial theme. The connection between this and the associations that occur are often not at all realised by the subject; for this, however, there are special and definite reasons that will presently be indicated. Discussion of the psychological principles involved in the use of psycho-analysis,¹ as well as of other allied topics, must be reserved for a further paper.

2. Freud's views concerning *affective processes* show certain important deviations from those currently accepted. He tentatively states as a working hypothesis that "there is to be distinguished in psychical functions something (amount of affect, sum of excitations) which has all the attributes of a quantity — although we have as yet no means of measuring it, — something capable of being increased, diminished, displaced, or carried off, and which spreads itself over the memory traces of ideas, rather like an electric charge over the surface of the body." The two words in brackets (*Affektbetrag*, *Erregungssumme*) indicate that the property in question can be described in either psychological or physiological terms. Indeed, he regards it as something essentially centrifugal in nature, in that it constantly tends to discharge its psycho-motor energy — characteristically by means of bodily expression — in a manner analogous to motor and secretory processes. Most significant, however, is the assumption that it has a certain autonomy, so that it can become released from the idea to which it was primarily attached, thus entering into new psychical

¹A description of the relation of psycho-analysis to psycho-therapy was given in the *Journal of Abnormal Psychology*, June-July, 1909.

systems and producing wide-reaching effects. This displacement of affect from one idea to another Freud denotes as transference (*Uebertragung*), and says that the second idea may in a sense be termed a representative of the first. A simple illustration of the process is when a girl transfers the affective process properly belonging to the idea of a baby to that of a doll, and washes, clothes, fondles and cares for the doll, and even takes it to bed with her or makes attempts to feed it, thus treating it in all possible respects as she would a baby. An equally familiar observation is the behavior of a spinster towards a pet animal. In Browning's "The Last Ride Together" the same mechanism is beautifully seen; the hero, failing in his ambition to win his mistress, consoles himself with the enjoyment of their last ride, and gradually exalts the significance of this until in a final ecstasy he imagines not only that it is an adequate replacement of his former aim but that it represents the highest bliss that can be attained on earth or in heaven.¹

3. Connected with his views on affective processes is the emphasis Freud lays on the *dynamic nature of mental processes* in general. This is best described in terms of the scheme by means of which he depicts the structure of the mind. This scheme he proposes in the most tentative way as merely a working hypothesis, expressly disclaiming any likelihood of mistaking the scaffolding of a theory for the building that will later be erected. Taking the analogy of a microscope or telescope, the theory of which makes use of ideal localities in space, he develops the notion of psychical locality. The mind is a complex reflex apparatus or system, with a seat of entry at one extremity and of discharge at the other. The former is of course the sensorial extremity, the latter the motor. Every mental process tends to set up a movement from one end of the apparatus to the other. To begin with is the perception, in its sensorial form. This is not fixed as such, but further on in the system in the form of a 'memory trace.' The further forward the process moves the greater is the extent to which it becomes associated with others; at first the association is of a superficial kind (clang, etc.), later on it is of a higher order (similarity, coördination, etc.). A mental process is recalled not in its primary perceptive form, but as a 'memory trace.' Accompanying every mental process is a varying amount of psychical energy, which roughly corresponds with what we term the affect. Excessive accumulation of this energy results in a tension that is experienced as pain

¹ A still better instance from poetry I have fully described in an article that will shortly appear in the *Journal of Nervous and Mental Disease*.

(*Unlust*), and there is a constant tendency towards the discharge of this energy (*Abfuhr*). The discharge is experienced as pleasure, as relief or gratification (*Befriedigungserlebnis*).

The way in which the relief is brought about differs in complexity in the young child and older persons. The infant finds by experience that satisfaction of a given need, *e. g.*, hunger, is associated with a certain perception, *e. g.*, the sight of food. The recurrence of this need therefore brings with it the desire to reproduce the perception associated with satisfaction of it. It is possible that at first this may occur by regression of mental processes so that a hallucinatory perception is produced. Experience, however, soon teaches that this method is inadequate to still the need, and that in their capacity in this respect there is an important difference between perceptions externally evoked and those internally evoked. Internal perceptions are adequate only when they are durable, as in the hallucinations of the psychoses. The psychical energy corresponding with the need therefore sets in action further groups of mental processes, the function of which is to modify the environment in such a way as to bring about an externally evoked perception of the kind desired; for instance, the child cries until it is fed. The regressive tendency to reproduce the primary perception by internal means Freud terms the *primary process* (*Primärvorgang*). The *secondary process*, which inhibits this tendency and directs the energy into more complex paths, is the work of a second and entirely different psychical system. All the complicated thought processes that occur, from the memory picture to the psycho-motor mechanisms that result in changing the environment so as to bring about the repetition of the desired perception, constitute merely a detour, which experience has shown is necessary in order to produce the wish fulfilment. These two systems, which are already present at an early age, form the nucleus for what later becomes the unconscious and fore-conscious respectively.

4. The subject of '*psychical repression*' (*Verdrängung*), which plays such an important part in all Freud's writings, may be considered as a direct continuation of the previously mentioned one concerning the relation between the primary and secondary systems, though it is less hypothetical in nature. The fundamental regulating mechanisms of mental processes are the tendencies to seek pleasure, by bringing about relief from psychical tension, and to avoid pain, by preventing accumulation of psychical energy. These strivings, which have a more or less definite aim, constitute a wish in the broad sense of the term. When, now, this wish cannot for external reasons be gratified,

the tendency of the psychical energy to discharge itself is inhibited, a local damming up takes place, and the mental process in question loses its former power of making free associations. It in this way forms a circumscribed 'complex,' to use Jung's term. Under these circumstances the secondary system cannot make use of the energy of that portion of the primary system, for to do so would only result in the evocation of pain (*Unlust*), and it is a chief function of the secondary system to avoid this whenever possible. We have here, then, all the conditions for an intrapsychical conflict, and Freud maintains that, when a mental process is the seat of a competition of opposing affects, blocking (*Sperrung*) of the usual associative activities occurs, and the mental process becomes shut off or dissociated. This ostrich-like function of the secondary system therefore results in exclusion of the pain-producing mental process from consciousness. In daily life this mechanism is extraordinarily frequent, and shows itself in many ways, the simplest of which is the disinclination for being reminded of disagreeable occurrences we would rather forget.

'Normal' and 'abnormal' conscious mental events differ only quantitatively, not qualitatively, both proceeding by the same mechanisms of the same psychical apparatus. In both cases the energy of the unconscious mental process (*i. e.*, the wish) is directed into the complex conscious paths according to the principle of pleasure and pain, the chief difference between the two being that the discharge of energy in the 'abnormal' case takes place by a more circuitous and unusual route than in the 'normal' case. In both cases consciousness exerts a 'censor' influence over the dynamic process, allowing it to find expression only in certain definite ways. The characteristic function of consciousness is the exercise of this censor influence. Consciousness may be compared with a sense organ, in that it allows the perception and differentiation of psychical qualities. Its action differs from that of a sense organ in that it is concerned with the perception, not only of externally produced stimuli, but of internal psychical processes. It is probable that between fore-conscious and conscious processes a censor action is also interposed, of the same kind as that between unconscious and fore-conscious processes.

5. The manifestation of abnormally repressed mental processes is to be understood only by consideration of the action of *intra-psychical conflict*. As has already been said, conflict between two tendencies or wishes results in a blocking and dissociation of the mental process concerned. The direct route into consciousness is impeded, and the energy passes into a circuitous side-path. The direction thus taken

is, however, rigorously determined by preceding psychological and physiological factors. The energy may become linked either with other mental processes or with physical ones. In the first case the affect accompanying a given idea, which, being dissociated, is incapable of becoming conscious (*bewusstseinsunfähig*), becomes transferred to another one which is assimilable in consciousness (the process known as *Uebertragung*). This is the typical mechanism underlying the production of obsessions and most phobias. An insistent impulse to think of a non-permitted subject shows itself by an obsessive thought about another, associated, but more acceptable one. The passage from the one idea to the other occurs through one of the well-known forms of mental association, usually a lower form, such as extrinsic and particularly clang associations. Brill¹ narrates an instance in which a patient, possessed with licentious impulse relating to a *dog*, suffered from an apparently innocent obsessive thought concerning *God*.

In the second case the energy finds an outlet in some somatic manifestation, a process Freud terms 'conversion.' This is the characteristic mechanism underlying hysterical troubles, where a given bodily symptom, such as a tremor or an aphonia, is the expression of a repressed mental complex. Here also, as in the purely mental field, the actual direction taken by the discharging energy is determined by the existence of performed associations, such as the usual physical accompaniments of emotion, and the occurrence is favoured by an unusual degree of readiness of the physical response (*somatisches Entgegenkommen*).

In both cases the formation of the unusual associations, which permit the circuitous discharge of psychical energy, takes place outside consciousness, and the subject quite fails to apprehend the significance of the end manifestation, or the connection between it and the primary mental process. Yet the mental events that precede the manifestation may be of the most complex order, fully as much so as conscious ones.

6. Stress should be laid on the importance Freud attaches to *infantile mental processes*. He regards the mental processes, and particularly the wishes, of early childhood life as the permanent basis for all later development. Unconscious mental life is indestructible, and the intensity of its wishes does not fade. Wishes and interests of later acquirement are chiefly significant in so far as they ally themselves with

¹ A. A. Brill, Freud's Conception of the Psychoneuroses, *Medical Record*, Dec. 25, 1909.

those of childhood life, though the association is of course not a conscious one. A great number of the reactions of adult life owe their real force to the adjuvant impulse contributed by the unconscious. Freud, therefore, looks upon the whole of a subject's mental life as a continuity, as a series of associated trends. The appearance of complete discontinuity that it so often presents is an illusion, due to the ignorance of the preceding unconscious influences. For instance, a person may at the age of twenty have his attention for the first time directed in a given line of interest, and may in consequence of this choose a profession and determine his life's career, but the real reason why he reacts in this way to the external influence is that it corresponds with, and becomes associated to, deeper unconscious trends that arose in early childhood life. These views naturally have great importance in their bearing on education,¹ for it is substantially maintained that the main traits of character are permanently determined for good or ill before the end of the fifth year of life. Freud holds in general that, owing to our ignorance of the most important mental processes of early childhood, and our own personal amnesia for this period, the significance for later life of these early trends is vastly underestimated.

The amnesia for early mental processes is even greater than is generally supposed, for not only is much actually forgotten, but a selection takes place of such a kind that only the least significant part is remembered. Thus the actual memory for this period is even less valuable than it appears. Further than this, our childhood memories are also less trustworthy than they appear, for later falsifications, distortions and inventions, arising particularly in the conscious and unconscious phantasies of puberty, impair the reliability of them to a much greater extent than is generally known; it should, however, be added that the technique of psycho-analysis almost always enables one to differentiate between an accurate recollection and a falsified one. This infantile amnesia is, according to Freud, not a natural, physiological process, needing no explanation. He considers that, were it not for our extreme familiarity with its happening, we should regard it as by no means so obvious and comprehensible as we at present do. For him it is a curious problem that calls as urgently for solution as that of other less familiar mental events. The cause of the amnesia he sees in the psychical repression that plays so large a part in early education. Children come to the world with potential trends and desires which are

¹ See 'Psycho-analysis and Education.' To appear shortly in the *Journal of Educational Psychology*.

innocent enough at an early age, but which are of such a kind that the gratification of them is highly unacceptable to adult standards. Early training largely consists in weaning the child from these desires and directing his mind towards other interests, a process Freud terms 'sublimation.' The primitive trends themselves, such as egotistic enjoyment without regard for others, concern with certain bodily functions, and so on, have to be suppressed, and the mental processes representing them are repressed and become unconscious. This, however, is not effected without a certain cost to the individual, and amongst other penalties paid is the amnesia for infantile mental life. As in other cases, such as for instance with hysteric post-traumatic retrograde amnesia, the memories lost are not only those that directly concern the thoughts and wishes now invested with painful and guilty feeling, but also those that are in any way, *e. g.*, in time, associated with these. Further, as was above pointed out, although the desires in question have been repressed into the unconscious, they lose none of their dynamic functions, and, when the sublimation process is not sufficiently potent to provide an outlet for the accompanying psychical energy, other paths of discharge have to be forged of a kind that for practical reasons are called pathogenic. It is in this way that psycho-neurotic symptoms arise, which thus represent in a disguised form the gratification of repressed wishes. The chief difference between the indirect expression of an unconscious wish by means of a neurotic symptom and that by means of a sublimated activity is that the latter is useful for social aims, whereas the former is harmful both socially and to the individual.

7. The part of Freud's psychology that has aroused most opposition is his attitude regarding the significance of *psycho-sexual trends*. We are not here concerned with the nature of this opposition, which arises partly from a misconception of Freud's own views and partly as a result of the peculiarly heavy social ban that is laid on certain aspects of the subject. It should in the first place be stated that he applies the term 'sexual' far more broadly than is customary, and thus includes under it functions that are not generally considered to be of a sexual nature. He does this, however, not in order to distort the usual connotation of the term, but because he finds by experience that many psychical manifestations not commonly thought to be derivatives of the sexual instinct are in fact so. He thus extends, not the connotation of the term 'sexual,' but the conceptions denoted by it. A little reflection makes it evident that, even if the term is by definition made to refer only to tendencies that have to do with the reproductive instinct,

it is impossible to confine it to impulses that directly tend to bring about the reproductive act. For instance, no one with any experience of such a 'perversion' as fetishism would refuse to call this sexual in the full meaning of the term, although from its very nature it expresses a negation of the reproductive act. Even more normal manifestations, which anthropologists have shown to be derivatives of the sexual instinct, such as shame, cruelty, etc., are by no means obviously tendencies that favour the consummation of this act, although it may be true that they are indirectly connected with reproduction. On precisely similar grounds Freud holds it justifiable to apply the term 'sexual'¹ to mental processes which, like shame, derive their origin from the sexual instinct, and the only reason why his application of the term is more extensive than that of other writers is that, by his psycho-analytic investigation of the unconscious, he has been able to trace to this origin a number of processes that at first sight do not appear to be connected with it. He has striven to free himself from the prejudice that refuses to recognise the sexual nature of a mental process until this is made so obvious as to be quite indisputable, and he points out how deeply rooted in the human mind is this prejudice.

These preliminary considerations may be thus resumed. Freud lays stress on the dynamic aspects of mental processes, and sees in the tendency of the affects to seek discharge of their tension the motive force determining the flow of mental life; he expresses this in terms of wishes. He holds that unconscious mental life is rich and complex, and by the interaction between it and consciousness explains the apparent discontinuity of conscious processes, thus adopting a deterministic attitude towards intuitive and apparently spontaneous mental events. Much of this interaction depends on the result of conflicts between various psychical trends, some of these undergoing repression so that they can be manifested only along indirect channels. He attributes fundamental importance to the repressed wishes of early childhood life, and to the psycho-sexual systems of activities.

We may now shortly consider some of the fields in which Freud has applied the foregoing principles, and it will be convenient to

¹ Freud uses the term *Libido* to indicate sexual desires and longings in all their aspects; this corresponds in its connotation with that possessed by the word 'hunger' in relation to the nourishment instinct. Obviously the word, for linguistic and other reasons, cannot be employed in English; Dr. Putnam, in his recent luminous essay on Freud's work (*Journal of Abnormal Psychology*, Vol. IV., Nos. 5 and 6), has pointed out that the nearest English equivalent to it is 'craving.'

begin with the subject last mentioned, namely *Sexuality*. In the first place Freud holds that the mental processes commonly called sexual, which bear a relatively precise relation to reproduction, are the outcome of a development from a broader group of processes in earlier life, of which certain ones have become selected and intensified while others have become suppressed. In the child are a number of sexual dispositions, the functioning of which notably differs from that of adult sexual processes, and the later development of which is subject to the greatest variability. A clearer view of these early dispositions is obtained by considering the different kinds of adult perversions. Freud draws a distinction between the sexual object, the source of attraction, and the sexual aim, the activity in which the impulse manifests itself. The difference between these is evident when one dissociates such an impulse as the masochistic one, *i. e.*, the desire to obtain enjoyment through experiencing submission or pain, from its objective, which may be either a male or a female person. Looked at from this point of view perversions fall into two groups. On the one hand are those that show a deviation from the normal objective, such as homosexuality. Freud thinks that this inversion of the normal objective can only be explained by assuming that man has a bisexual predisposition psychically as well as anatomically, and that the normal is reached by the heterosexual component being developed at the expense of the homosexual one. On the other hand are those that show a deviation from the normal aim.

Freud finds that the potentialities of all forms of perversion already exist in the child, which he therefore terms *polymorph pervers*. Under the pressure of educative influences, however, they normally become suppressed, and the psychical energy accompanying the impulses is sublimated into other directions of greater social value. Two other possibilities, however, are open, besides the normal one of sublimation. First, the tendency itself may acquire abnormal strength and may manifest itself in later life as an actual perversion, as indicated above. Secondly, when the conflict between the impulse and the repressing force is especially strong the impulse may find expression in the production of a psycho-neurotic symptom, which therefore is a disguised form of gratification of the perverse impulse. Hysterical symptoms thus constitute the negative of perversions. These three outcomes are naturally not sharply marked off from one another. One and the same man may show the results of sublimation of a given tendency, which may for instance be revealed in the form adopted by an artistic creation, at a time when he is suffering from both a perversion

and a psycho-neurosis. A sub-variety of the sublimation process is the development of abnormal traits of character, which have little or no social value; the morbid tendency of some 'Puritans' to be shocked at the slightest pretext belongs to this group, and is to be regarded as an excessive reaction formation.

The psycho-sexual life of children differs from that of adults in three main characteristics, in the different nature of the pleasure experienced, in their relative independence of outside persons for this (auto-erotism), and in the fact that they obtain pleasure from much more manifold sources and in much less differentiated ways than do adults. At puberty important changes take place in all these respects. The excitations, mechanical and others, that gave satisfaction to the child's desires, now come to contain a painful component (*Unlust*) due to the feeling of tension experienced. They thus constitute merely a 'fore-pleasure' (*Vorlust*), which impels to further activities destined to produce the 'end-pleasure' (*Endlust*) that relief of tension brings about. The sexual objective, a member of the opposite sex, now wins greater definition and significance. Lastly, the sources of excitation become more localised, particularly anatomically; this is brought about by repression of the more accessory pleasures in the way indicated above. The greater proneness of women to suffer from psycho-neuroses is explained by two characters their sexual development shows in contrast with that of men. In the first place, the sexual activities of children pertain rather to the masculine type, so that at the time of puberty the augmentation of repression that then takes place has in the woman more to accomplish in suppressing the homosexual component than it has with men. In the second place, a shifting of the primary erogenous zone takes place with them, from the clitoris to the vagina, whereas this does not occur with men. The changes at puberty being more complex in the case of women, the possibilities of erroneous development are much greater.

The sexual thoughts of children are much more extensive and important than is generally believed. Usually in the third and fourth years of life questions begin to occur to them, the parents' answers to which are less satisfying and less often believed by them than is commonly thought. At this time, and shortly after, they begin to withdraw from their parents, and in their own world weave explanations and theories that are more satisfactory to them. These theories frequently contain more of the truth than might be imagined, and are of great significance in later life. Coincidentally with the repression mentioned above there occurs repression of, and subsequent amnesia for

these early thoughts. A period of latency follows, usually from the fifth to the tenth years, when the process of sublimation is at its highest activity. Most adult memories for sexual thoughts seem to have begun in the latter part of this period, the earlier ones having been quite forgotten. In the earlier period sexual phantasies relating to the parents or other members of the family are very frequent, and often determine important reactions and choices in later life.¹

The next great field that Freud has investigated is that of *Dreams*. I have elsewhere² given an account of Freud's work and conclusions on this subject, and so need here mention only the outstanding features of his theory. Dreams are generally thought to be a meaningless conglomeration of psychical processes evoked by chance somatic stimuli. Freud, on the contrary, finds that they are the disguised expression of highly significant underlying psychical processes. He contrasts the 'manifest content,' which is the dream as directly related, with the 'latent content,' which is the group of thoughts reached by psycho-analysis of the dream. In the young child the manifest and latent contents are identical, and the dream plainly represents the imaginary fulfilment of an ungratified wish; the egocentric nature of the wish is equally evident. Freud maintains that every dream represents the fulfilment of an egocentric wish, and that the chief difference between the dreams of adults and those of young children is that in the former case the wish is a repressed one, the presentation of which is disguised so as to make it unrecognisable until it has been submitted to psycho-analysis.

The mechanisms by means of which is brought about the distortion between the latent and the manifest content are quite precise. The thoughts of the latent content are unconscious, being repressed by the censor of consciousness. In the waking state they cannot penetrate to consciousness, but during sleep, when the activity of the censor is relaxed, they can do so, provided, however, they are distorted so that their true meaning is not recognized. The formation of the dream, or dream-making, is purely concerned with translating the latent thoughts into the distorted shape of the manifest content; it performs no intellectual work whatever. Apparently intellectual processes in dreams have been taken bodily from the latent content. The extent to which a given dream is incomprehensible, illogical, confused, and contradictory exactly depends on the degree of distortion that has taken place,

¹ An account of Freud's incest theory will be found in the *American Journal of Psychology*, Jan., 1910.

² *American Journal of Psychology*, April, 1910.

and is proportional to the amount of resistance offered by the subject to disclosing the underlying thoughts.

The four mechanisms of the dream-making are:

1. *Condensation*. — Every element in the manifest content represents the fusion of several in the latent thoughts, and vice versa. The latent content is condensed to a tenth or a twentieth of its original extent. The condensation is shown in several ways. For instance, a figure in a dream may be constituted by the fusion of the memories of several different actual persons, either by fusing some traits of one with others of another, or by making prominent the traits common to different persons and neglecting the ones not common to them. The same process frequently affects names, so that neologisms may be formed exactly analogous to those found in the psychoses.

2. *Displacement*. — The psychical intensity of a given element in the manifest content shows no correspondence with that of the associated elements in the latent content; an element that stands in the foreground of interest in the former may represent the least significant of the latent thoughts, and an apparently unessential feature in the dream may represent the very core of the dream thoughts. Further, the most prominent affect in the dream frequently accompanies elements that represent the least important of the latent thoughts, and vice versa.

3. *Dramatisation*. — The manifest content depicts a situation or action, a fact that exercises a selecting influence on the mental processes to be presented. Logical relations between the latent thoughts are as such not represented, but they may be indicated by means of certain special devices. Thus similarity may be represented by identification, causal relationship by making the one representing group of elements follow on the other, as in the gradual transformation of one scene with another, opposition and contradiction by inverting the two corresponding elements of the already formed dream and so on. The characteristic that most dreams show of presenting the manifest content predominantly in a visual form Freud terms Regression, and explains it by a very interesting theory in which he also discusses the production of psychotic hallucinations.

4. *Secondary Elaboration*. — This is the product of consciousness, and is brought about by the alteration undergone by the dream processes during their apprehension in consciousness. To it is due whatever degree of ordering and consistency there may be found in a dream. It particularly affects parts of the dream that have been insufficiently distorted during the dream-making; its action continues

after waking, so that the memory of a dream becomes more altered the greater is the period that has elapsed since it was experienced.

The affect in the manifest content is invariably less intense than that in the latent content; this inhibition is due partly to the tendency to psychical regression during sleep, and partly to the suppressing effect of the censor. The affect is, as was mentioned above, displaced in the manifest content, but the apparent incongruity in its occurrence and association is solely due to this displacement; in the dream thoughts it is quite congruous and logically justified. The affect itself undergoes no distortion in the dream-making, as does the conceptual content, so that it is of the same nature in the manifest as in the latent content. The forgetting of dreams is, like the distortion of the latent content, a manifestation of the activity of the censor. The most important part is first forgotten, and often is recalled only during the analysis.

The sources and material from which dreams are composed differ as regards the manifest and latent contents. In every dream appears some incident of the preceding day. Indifferent incidents, *i. e.*, those of little interest to the subject, frequently appear. These may be of the preceding day, or of older date; in every case they have obtained psychical significance by becoming on the day of their occurrence associated with significant experiences or memories. Somatic stimuli, *e. g.*, pain, may sometimes provide material. This, however, is treated like other psychical material, and is woven into the dream under the same conditions; under no circumstances can it alone give rise to a dream. Hypermnesia for previously forgotten infantile events is sometimes seen in the manifest content, and much more frequently in the latent content. It is probable that the groundwork of every dream is of infantile origin. A recent or conscious wish is inadequate to cause a dream unless it is associated with a repressed, unconscious one; this latter is always the real cause, and the superficial one is merely the 'instigator.' The latent thoughts are always of high personal significance to the subject, and are in direct continuity with the rest of his mental life. Dream analysis is the most valuable means at our disposal for penetrating into the unconscious.

The function of a dream is to protect sleep by stilling the activity of unconscious mental processes that otherwise would disturb it. When, however, the activity of the endopsychic censor, which is diminished during sleep, is insufficient to keep from consciousness the latent thoughts, or to compel such distortion of them as to render them unrecognisable, recourse has to be had to the accession of energy that the

censor can exert in the waking state, and the sleeper wakes, usually in terror.

In his book on *Wit*¹ Freud has given a valuable contribution to the psychology of this subject and to that of humour; it is extraordinarily rich in new psychological points of view. The pleasure-bringing effect of wit depends partly on the technique and partly on the tendencies of this. Freud has analysed in great detail the various classes of witty jokes, and finds that the technique of their production shows the closest resemblance to that employed in dreams: different forms of condensation, displacement, indirect presentation, reversal into the opposite, failures in thought, production of neologisms, fusion into a unity, etc., etc. According to their aim he divides witty jokes into harmless ones, the aim of which is purely to bring pleasure, and those that have a pronounced tendency; the latter are subdivided into four classes, the obscene, the aggressive or hostile, the cynical, and the sceptical respectively.

The pleasure of wit arises in an economy of psychical expenditure (*Ersparung an psychischem Aufwande*). Four stages in the development of wit may be distinguished. The psychogenesis of wit leads back to the play with words so characteristic of early childhood life. The suppression of this activity, brought about by the development of logical thought, and a knowledge of intrinsic relations between the different conceptions represented by words, is under certain circumstances relaxed in later life, and so arises the simple joke (*Scherz*), in which enjoyment of the old play is again made possible. In the harmless witty jest (*Witz*), the abrogation of the suppressing criticism allows the expression of a given thought of some value; the difference between joking and wit lies solely in the value of the thought communicated in the later process. Finally, in wit that has a pronounced tendency, a form that has a more complex mechanism, there is allowed to come to expression a thought that, owing to the force of repression, could not reach expression in a direct way. In the last-named form of wit a certain fore-pleasure (*Vorlust*) is obtained through the technique of the jest itself, but instead of this being all, as in the harmless jest, it serves to release further inhibitions, so that a deeper source of pleasure is reached.

Wit has a great deal in common with dreams beyond the fact of their both employing the same technical devices. A witty joke suddenly *occurs* to one; it is the product, not of the conscious mental

¹An article on this subject by Dr. A. A. Brill appears in the *American Journal of Psychology*, April, 1910.

processes, but of the unconscious. The source of the pleasure is also an unconscious one; in wit, strictly speaking, we do not know what we laugh at, and constantly deceive ourselves over the excellence of a joke and the value of the conveyed thought according to the varying part played in the production of our pleasure, on the one hand by the technique of the joke, and on the other hand by its tendency. The most important difference between wit and dreams is that the latter represent an asocial process, the former a social one. Further, dreams serve to guard from pain, wit represents a search for pleasure. Freud makes a number of penetrating remarks on the significance of wit as a social process, its function, and the precise relations between the speaker and hearer, that cannot here be discussed.

Freud further extensively deals with the relation of wit to the comic. The production of the latter and the source of pleasure are, in contradistinction from those of wit, quite conscious. Of the kinds of processes described as comical ingenuousness stands nearest to wit. It differs from this in being produced free from inhibiting influences and without the application of technical devices; the pleasure it gives is due to the sight of another setting himself without effort beyond the action of influences that would inhibit the onlooker. Comic processes proper arise from a comparison between our own person and that of the person at whom we laugh, especially when the latter shows an over-expenditure of physical output or a lack of mental. Humour is a defense against the painful or disagreeable; the energy that would otherwise have produced pain is transformed into a source of pleasure. For humour only one person is necessary, for comicality two, for wit three (the producer of the joke, the imaginary person against whom it is directed, and the person who listens to it).

With wit there is effected an economy of expenditure in inhibition, with comic in thought, with humour in feeling. All three transport us into a state of our childhood, "in which we did not know the comic, were not capable of wit, and did not need humour in order to make us feel happy in life."

In another volume Freud has developed a number of interesting and suggestive investigations into the *Psychopathology of everyday life*. The principle underlying this work was his view that certain inefficiencies in our mental activities and certain apparently purposeless performances, both of which groups seem to have no psychical meaning, show themselves on analysis to have been determined by unconscious

¹See A. A. Brill, 'A Contribution to the Psychopathology of Everyday Life,' *Psychotherapy*, 1909, Art. IX.

motives. These unconscious motives concern unacceptable processes that have been inadequately suppressed, and that come to expression by interfering with the accomplishment of conscious mental activities.

Of the first group may be mentioned the following. Certain acts of forgetting are due to a half-conscious desire to forget, an extension of our general tendency not to recall the disagreeable. The memory that cannot be recalled may itself be of a painful nature, or may be associated with another of this nature. Difficulty in recalling well-known proper names is particularly often to be explained in this way. The actual source of unpleasantness is usually by no means obvious, and often can be discovered only by a little psycho-analysis. It frequently happens during the effort to recall a given name that another one presents itself, sometimes in such a compelling way that it is hard to put it aside. Analysis then shows that the second name is a disguised replacement of the first, being a compromise between the effort to recall the name searched for and the unconscious inhibiting impulse. This concealing-memory (*Deckerinnerung*), in which one memory appears as a cover for another associated one, may refer to whole episodes, particularly those of childhood life. It is one of the ways in which falsification of memory is brought about. Allied to these defects in recollection are certain mistakes in action (*Vergreifen*) in which the error principally consists in omission. Thus many misplacements of objects, with subsequent inability to find them again, apparently accidental destroying of objects, and so on, are determined by unconscious motives.

To the second group belong many instances of mistakes in speech (*lapsus linguæ*), in reading, in writing, and in apprehending what is said to one (*Versprechen, Verlesen, Verschreiben, Misverstehen*). As in the former cases the mistake made is, like a hysterical symptom, a compromise between the conscious intention and the unconscious one. Such mistakes, particularly often slips of the tongue or pen, betray hidden thoughts or wishes against the person's will. More complicated mistakes of the same nature are various symptomatic movements, general mistakes in knowledge, when the person knows well the actual fact that he has incorrectly described, and elaborately incorrect performances of simple tasks. With all these errors, as of the ones mentioned above, Freud has given the analysis of a great number of beautiful and instructive examples, the study of which is invaluable for practical psychology. He adds in this volume a chapter on the subject of superstition and its psychological significance, making many interesting contributions to the subject of false beliefs and the tendency to read significance into accidental coincidences. Many per-

sonal occurrences that seem to be chance are really determined by unconscious motives, and superstitions arise by the inner conviction of meaning in apparently chance events, which is projected by the individual on to external phenomena.

In conclusion, a few of the other fields to which Freud has applied his methods of investigation may be shortly mentioned. The problem of artistic creativeness, its nature and sources, has occupied him in an article and a book he has published on the subject.¹ Explanations are given on the basis of the principles mentioned above, particularly that of the conscious working out of unconscious wishes of childhood origin that are striving for expression and gratification. Abraham, Rank and Riklin have published volumes developing in detail suggestions of Freud's concerning the psychological significance of myths, legends and fairy tales. These are the expression of perennial wishes, of the same kind as those operative in dreams and in the psychoneuroses; the mechanisms of repression and distortion, of the same nature as in those mental activities, are in them plainly to be traced, becoming more elaborate when the social censor gained in force and complexity as civilisation developed. Last, but not least, should be mentioned the brilliant application of Freud's principles to the elucidation of the psychoses made by Jung² and his pupils; this work has already been several times reviewed in the BULLETIN. The perspectives opened by Freud's investigations are thus seen to be as vast in their extent as they are momentous in their nature.

¹ I have indicated some of Freud's views on this subject in an essay developing his explanation of the Hamlet mystery, published in the *American Journal of Psychology*, Jan., 1910.

² *Psychology of Dementia Præcox*, translated by Peterson and Brill, 1909. See also Brill, *Journal of Abnormal Psychology*, Oct., 1908, and *American Journal of Insanity*, July, 1909, and Ernest Jones, *American Journal of Insanity*, Oct., 1909.

PSYCHOLOGICAL LITERATURE.

APPARATUS IN THE BRAIN.

Ueber Apparate in dem Hirn. CONRAD RIEGER. (Arbeiten aus der Psychiatrischen Klinik zu Würzburg, 5tes H.) Jena, G. Fischer, 1909. Pp. 197. 6 Mk.

With a refreshing courage of his own predilections in the use of paragraphing, all the possible varieties of type, and digressions into the field of psychophysical apparatus (a very useful stop-watch measuring 'Tertien' according to the duodecimal system), literature, and the follies and weak spots of human nature, Rieger offers here the continuation of his study 'Ueber Widerstände und Bremsungen in dem Hirn' (Arbeiten, 2, 1). Brain activities are either legato or staccato, fusions or activity in smallest units, impulses with or without change of direction. According to Rieger, any interruption causes a delay of at least 10 'Tertien.' The unit of speech (thought spoken or whispered) is the sound or syllable. In a stream the unit absorbs about 4 Tertien = 66σ , the average staccato push 15 T = 250σ ; one second allows on the average 15 legato units and 4 staccato units, with, of course, some differences of considerable importance in individual psychology.

Legato submerges analysis and implies habituation. To get out a syllable heard (as in the attempt to speak after what another reads), takes about 10 T, whether it be simple or made up of many sounds, old or newly invented. Rieger infers from this that the reactions in the brain exist as tendencies and dispositions but not as a fixed and finished something. Rieger further studies the time it takes to get out a word spelled out to one (150 T), or in spelling words given one (50 T); to get ready always takes a considerable time, which denotes peculiar difficulties in compounding or decomposing linguistic material.

This leads him over to those individuals in whom the transition from compounding to taking apart not only takes a certain amount of time but is really no longer possible. An idiot who can copy and even transcribe letters and words reads the individual letters, but hardly any but the shortest words. He only writes his name, but cannot, in turn, write the individual letters on dictation. Another idiot

cannot read letters but only words. These cases present independent defects of the legato and of the staccato. A case of agraphia of Liepmann hears with understanding, reads fairly well, but cannot write and not even combine lettering — he does not know how to handle space. An idiot writes his name Hans Ritter, but cannot write Ritter. In delirium tremens, there is a 'compulsive inner legato' in the brain-apparatus for spatial-material concepts without correction by actual impressions; at the same time the speech-concept apparatus works correctly. Heilbronner's case (*M. f. Ps.*, XVII., 116) gives all the details of a picture but not the name of the whole (kitchen).

One of Rieger's patients can read any letter in any position, but she cannot recognize and describe the actual position of the letter; she is space-shy, and feels very stupid. She has r. hemiplegia and slight motor involvement of the left side. She has no spatial conception, if she has to take the things apart, a defect which may play a great rôle in apraxia. Whatever can be done without space-conceptions, does not reveal the 'apraxia.' One patient may be able to take out a letter from an envelope and put it in again, but only when he does not analyze it and when he succeeds at once; in this case, intention and plan are evidently impossible. He may pick up bread-crumbs, but not if told to do it in a special way, *i. e.*, if the 'Lenk und Stellapparat' comes into play, the Vorstellung. *Patients with defect in the space-sphere cannot plan or even imitate figures with matches* (such as making a triangle, or putting two matches parallel to each other). Direct verbal conceptual vision may exist as long as no *spatial demands* are made: a patient reads das, and d, a and s singly, but cannot read the individual letter within the word or compose the word of three tablets, and probably cannot place matches parallel to each other. A patient with delirium tremens spells mentally better than in space, with tablets; a patient with disorder in the speech apparatus may do better with tablets than in mental spelling.

Thus Rieger comes to make a very striking contrast between a *speech-apparatus* and a *spatial apparatus*.

With a defect in the *speech-apparatus* the patient may count 4, 5, 6, but cannot say what is between 4 and 6.

Difficulty of decomposing words naturally determines agraphia; such patients may read well but write poorly. They have legato-complexes in their brain which they cannot take apart, and, moreover, a great difficulty about passing from one view-point to another. Rieger illustrates the flow from hearing into the linguistic and the spatial field;

further the passing of visual stimuli into the one field or the other and how in dreams vision is more conceptual than spatial, etc.

With the imperfect legato, Rieger contrasts the frequent 'unbridled legato' which goes with inability of abstraction, of decomposition and composition, of completion of fragments, of correcting errors. At the same time the 'Lenk und Stellapparat,' *i. e.*, the determining elements of the personality, dispose correctly of mere sounds, which the aphasic patient distinguishes clearly, or of things he handles and sees. Other cases, in turn, are affected in the spatial direction, understand what is said but cannot place it in any attempt to play hide and seek. In the normal the linguistic and the spatial apparatus blend; in many brain-lesions the two are taken apart.

As one of the examples — the whole book is made up of such examples and very little text without definite documentation — I quote the following contrast: You put half a dozen pictures of animals before two patients. "The one with linguistic-conceptual disorder never can find himself the word 'animals.' As soon as he looks at the pictures, a word for one of them enters his abnormal speech-apparatus, and he cannot throw it off. The one with spatial-material (räumlich-sachlich) disorder may be able to say 'these are animals, because there is no abnormal competition between his words; but he does not see correctly the individual pictures. If, in turn, I say to the patient with linguistic-conceptual (sprachlich-begrifflich) disorder: put the animals together, he may be normal because the words pass directly into his spatial-material apparatus where they work correctly. The one with spatial-material disorder may be able to repeat or say this, but he never is able to do it in reality. He cannot arrange anything in space. He has far too little spatial legato to be able to carry out such a plan."

Or (p. 125) "I say Fink to a patient with linguistic conceptual disorder and he repeats 'fängt.' Then I ask immediately: 'What is a Fink?' He says quickly and with assurance: 'A bird.' In the linguistic apparatus he failed; and yet he reacts correctly in the spatial-material domain,' etc. The spatial-material apparatus can act normally without the linguistic-conceptual side; he recognizes different kinds of the same type of objects for their use and nature even if he has not the word. But for those distinctions and selections in which a distinguishing word would be essential, he fails in the selection (p. 132).

Everywhere we see the influence of the 'unchecked legato,' the inability to take apart and join (shown also in the difficulty of passing

from one sense of a word to another and the difficulty with synonyms, the influence of the context on the inability to see mistakes).

The influence on the writing and reading and the errors furnish further data of analysis. What he says of an old man (p. 156) with unchecked brain activity and evidences of perseveration, and the helps the linguistic fields derive from the spatial field, etc., further of the importance of association complexes (p. 176), etc., belongs to a most refreshing description of common strings of observation in aphasia and in the normal.

Rieger then turns to the disorders in the *spatial-material apparatus* and the data which point to helps derived from the linguistic-conceptual side. The unchecked legato in the spatial-material field (as shown in the fabrications of delirium tremens), and the efforts to get anchorage in the linguistic-conceptual field (pp. 177-193), and finally sums up the following headings: Spatial-material brain-apparatus. Linguistic-conceptual brain-apparatus. The falsifications and the helps. Putting together and taking apart. Unchecked and weak states of the brain-apparatus. Under these headings he gets the leading results in the distinction of the two types of brain-apparatus and the unchecked condition of one brain-apparatus with compulsory inner legato with inability to take things apart, and in turn simple weakness of a brain-apparatus with deficient legato and inability to combine things.

All normal thought is a double process: internal language and internal vision and palpation (or in the congenitally blind merely internal palpation). For this second range of mental activity, man needs his internal space, without which he lacks plastic thought and plastic critique.

From an anatomical point of view the region around the posterior end of the corpus callosum appears more closely related to the spatial domain, and that around the left insula to the linguistic-conceptual domain.

The reader may find himself on unaccustomed paths in these sketchy notes from Rieger's book. It is quite obvious that great originality has delved into aspects of cerebral happenings rarely ever considered with equal patience and willingness to take what presents itself in the actual flow of events and not in the form of a reclassification of what may catch the observer's attention and fit into standard schemes. Any one who cares for a non-dogmatic and fresh though correspondingly bewildering analysis of fascinating and plain facts of the psychopathology of focal brain-diseases can well afford to turn to the book with its frequently startling digressions, but remarkably con-

crete material of discussion. Its review seemed impossible after the first reading. Reading it again, and a third time, makes me wish that I may have time to turn to it again. It is a human document from the work-shop of an 'original' in the best sense of the word.

A. M.

MOTOR DISORDERS.

Untersuchungen zur Kenntnis der psychomotorischen Bewegungsstörungen bei Geisteskranken. KARL KLEIST. Leipzig, Werner Klinkhardt, 1908. Pp. 171. Mk. 4.50.

The studies of Liepmann and Pick and others on the disorders of activity reviewed in earlier years of the BULLETIN have received a further development in the interesting way in which K. Kleist carries the logical conclusions into the field of Wernicke's motility psychoses.

Wernicke's ideal was to base clinical psychiatry upon objectively controllable motor and secretory end results of nervous activity. He starts from the psychic reflex path, which he divides into a psychosensory portion s-A (from primary identification or sensation to concept), an intrapsychic portion A-Z (from concept to goal-idea or aim-concept) and a psychomotor portion Z-m (from aim-concept to the motor concept which precedes the movement). Independent disorders in the psychomotor segment of the path naturally reflect upon the consciousness of the personality, produce 'motor perplexity,' or explanatory notions and supplementary movements. The topic of the essentially 'psychomotor' disorders is limited to those movements and reactions which are as such independent of volition and reasoning, and in the first volume Kleist undertakes the study of the defect symptoms or akineses, which come from an inability to translate conception and volition into movement.

As akinesis, we may find *complete flaccidity* (at times appearing in syncopal attacks with loss of sensation and reflexes (Wernicke) recalling hysterical and hypochondriacal palsies); or *flexibilitas cerea* (according to Wernicke the specific cortical reflex to passive motion if unhampered by interference by volition). Pseudo-flexibilitas and tonic (= negativistic) tension are incomplete eliminations of the volitional influence; in pseudoflexibilitas the passive movement paves the way for the corresponding volitional reaction and acts as a suggestion. In the negativistic tonic tension, the passive motion rouses the feeling of obstacle and the thought of an expected effort which seems so great that it turns into resistance. When the patient is unconscious the tonic tension comes purely from the cortical motor centers, very much

as the simple *flexibilitas cerea*. Some *muscles* show a *predilection for tonic tension*: the muscles of the jaw, the lips, the nape of the neck, and the closers of the eyes.

The akineses not infrequently lead to *Mitbewegungen* (irradiation of volition) or to awkward attempts (opening the mouth instead of protruding the tongue, inability to come down from a chair—see Wernicke's *Krankenvorstellungen*).

The akinesis is not always general. The speech-field is oftener and more lastingly affected; or the feet may remain in tip-toe position; or a pseudohemiplegic localization may exist, or the left arm alone be involved (hand pressed on the vertex; communication only in writing; the left hand at times relieved by the right, p. 411). Wernicke considered these circumscribed akineses as especially suggestive of transcortical interruption between Z-m and the motor projection fields. Disorders of intrapsychic mentation or in the aim concepts would produce *general*, not circumscribed akineses (?). The undeniable restriction of motor ideation and volition itself did not escape Wernicke, but he considered them as an effect of lack of confidence in the motor apparatus, and as motor perplexity the fact that the patient can *initiate* reactions but is *blocked for reactive responses* (reflectory mutism), is also used by Wernicke as evidence of a disorder beyond the intrapsychic sphere. 'A true disorder of volition would affect reactive and initiative processes alike.'

The hyperkinetic phenomena are either very primitive (the tensions, the *flexibilitas* and the simple parakineses or queer movements), consisting in phenomena of irritation and of defect; some of these primitive reactive parakineses are cortical short-circuits, like the tension or the *flexibilitas*, especially the jactatoid movements, wallowing, twisting, crying, roaring, often occurring with deep disorders of consciousness and accompanied by hypochondriacal sensations. There are evidently close connections between organic sensations and motility. Pressure of the kidney may produce akinesis of the hindquarters in animals; organic sensations may lead very directly to crude movements. Perverse attitudes and movements will depend on disorders of the sense of position or any other component of the concepts of motion. Wernicke declines Cramer's view of muscular sense hallucinations. Stereotypies and verbigeration are localized morbid stimuli. Motility psychoses generally belong to the somatopsychoses.

The flight and defense movements in epilepsy represent an exaggerated excitability of the cortical receiving fields discharging by the way of a cortical reflex; the same holds for hypermetamorphosis (in-

cluding grabbing, echolalia, echopraxia, etc.) — a disorder of compulsory attention, with short circuit 'akin to the somato-psychic reactive movements.' The more complex pseudospontaneous reactions are marked by the lack of consideration and aimlessness, the monotony, tendency to rhythm, to coarse exaggeration.

Kleist tries to harmonize here (p. 15) the aphasia paradigm and Wernicke's doctrine of three spheres of consciousness. The somatopsychic, allopsychic and autopsychic are also the substrata of sequence of excitation from sensation to movement. The fixation of the eyes, the shrinking from loud noise or bright light, etc., are plainly somatopsychic, considered activity autopsychic, and automatic activity possibly allopsychic. The somatopsychic arc is the most fundamental, and it may influence the psychomotor situation by overexcitability of the sensory receiving stations (see the explanation of the frights and the hypermetamorphosis); only in the autopsychic sphere could we demonstrate an articulation into sensation, start and end and motility concepts.

To lead over to the issues of brain-pathology, Kleist reviews briefly Wernicke's case of residual aphasia in a motility-psychosis. He could write but not speak, blow, whistle, inflate the cheeks, spit, sip, sniff or smoke by inspiration, or make voluntary movements with the tongue; he dragged the right foot, leaned to the right, the right index made incessant rhythmic movements. After five years, following several months of anxiety and auditory hallucinations, the patient felt several shocks through the whole body and then suddenly regained the command of the tongue. He soon succeeded in repeating known words, and soon also words which he could not have known, in a low voice with monotony and slowly, as if with some difficulty in the respiratory control. Wernicke spoke of a transcortical (but evidently atypical) motor aphasia; one might compare the condition with a circumscribed apraxia. The type of lesion and the presence of *flexibilitas cerea*, negativism and explanatory delusions would distinguish the condition from that in a coarse lesion.

Bonhoeffer and Heilbronner referred the condition to the motor area; Förster and Alter rather to transcortical processes (and Storch's stereopsychic). Förster also points to the possible disorder of afferent paths in the hyperkinetic conditions (analogous to the chorea in lesion of the cerebello-thalamic path), in the centripetal path between the central gyri and the anatomical substrata of the so-called stereopsychic. Alter speaks directly of stereopsychoses (*M. f. Psych. u. Neur.*, Vol. XVI., 1904).

Wernicke and Kleist thus see a field between the actual palsies and

the voluntary lack of motion and the task of the inquiry is whether we really can define clearly this field of dissociation between the aim concept and the movement concept. The question is whether there is a group of sufficiently clean-cut phenomena which would point to the existence of a mechanism between the sensory-motor integrations of the submental types — illustrated positively by what the motor center can do when it is isolated, as cortical *Eigenleistung* (with the transition into motor apraxia or ideatory apraxia), or as shown by cortical stimulation with electricity, or on the negative side as illustrated in the hemianæsthetic cerebral ataxia, or the mind-palsy type (loss of initiation or of support of hand movements owing to anæsthesia), or the various monoplegic or hemiplegic complexes (see my Harvey lecture of March 5, 1910) — and the motor functions dependent on clearly mental complexes or more or less well defined volitions (with their negatives in the form of ideatory and pure motor apraxia). The other alternative would be that the available submental units of integration suffice and that various disorders in the mental balance and in the submental balance give the end-result which Kleist would ascribe to a special unitary intermediate apparatus. Another way to put this problem would be the question to what extent can we push our knowledge of the cerebral integrations so as to win new territory in terms of neural mechanisms from the vague mass which must constitute the mental integrations. We can ask this question without prejudicing our ultimate position with or apart from the Wernicke-Kleist conceptions. If the results favor neural mechanisms, we should follow out the perspectives of Wernicke-Kleist. If we should find that certain neural mechanisms enter prominently, but owing to the activity of certain psycho-biological principles or agencies such as the nucleus of the motor phenomena of suggestion, the main impetus of future investigation would probably better choose the functional and perhaps psychological rather than the anatomical perspective. And as a third perspective we might venture to probe into the possibility of finding chemical or hormonelike units or toxins as the simplest clue or connecting link clinching certain reactions — the favorite hypothesis of modern pathology, but the one least fruitful so far.

Kleist takes up his personal studies with the account of a boy of 17, who passed through a brief excitement first into a typical akinetic state, then again transitory hyperkinetic states of a very elementary kind and finally recovery. Of slow development, crippled by a poliomyelitis affecting the right leg at $3\frac{1}{2}$ years, an apprentice with a tailor, backward but industrious, easily irritated, and often teased,

with frequent headache, the young man developed insomnia, then a pseudo-delirious excitement, in which he soon showed some motor difficulties, anxiety, muscular tension, chorea-like movements, throwing about of the trunk, grabbing, production of senseless syllables, then general hypotonia, and a variable condition of mutism, occasional echolalia, peculiar difficulty of motion, fumbling, an occasional clear moment (24.1). It is impossible to render in abstract the detailed observation. A principal point is the occasional assurance of the patient that he cannot move, that the limbs are too weak, that they take away his power, etc., then the hyperkinetic episodes, and the very detailed examinations of the motor reactions. The analysis of the mental condition is not quite as clear, but would probably have been difficult to attain more fully.

Kleist sees in this a short hyperkinetic stage followed by akinesis (first akinetic-stuporous and then essentially akinetic). True to his 'organic' tendencies, he compares it directly with the course of an apoplexy.

As a matter of fact we usually find this evolution in any disorder: active disturbance, reaction and solution. Kleist's case presents: (1) An incubation and prodromal period—not well analyzed. Merely insomnia and headache, but also exposure to twitting and actual inferiority, but industrious attitude. (2) A pseudo-delirious hyperkinetic motility psychosis. (3) Mixed stage of akinesis and attacks of hyperkinesis, and (4) solution with a phase of elation.

How this came and what it was and what it means in the life of the patient is not further discussed. Kleist is only concerned with the mechanism.

During the third period (end of March to May 5) aim-concept and volition were correctly formed, but failed owing to a motor disorder. Hypertonic states prevailed affecting special *muscles of predilection*: the sterno-cleido-mastoid, the masseter, orbicularis oris et oculorum, the muscles of the back and those resisting forward motion; often the muscles of the neck, less the extremities, and there more in the proximal muscles. The tension and resistance are often accompanied by the lighter disorders, *flexibilitas cerea* and *pseudoflexibilitas*. The resistance may also yield to complete relaxation (hypotonia), these different states may coexist and afflict different muscle groups in the various parts of the body. Exacerbations of the tonic state may even pass into hyperkinetic attacks, with very rudimentary motions gradually losing the character of expressions. After these the muscular tonus is always much reduced. Or the hypertonia may set in directly,

with pallor of the skin or cyanosis, or attacks of perspiration, slow, full and soft pulse and wide pupils. Examination causes flushing and rise of pulse and respiration. The tendon-reflexes also show wide fluctuations, but not quite parallel with the general tonus.

All initiative movements are lost but transitorily (as when the patient holds food and saliva). The patient at least swallows as a rule, later helps with the hand, attends to his needs and toilet. The eye-movements are freest, mimic movements most affected. Later the movements on request lag far behind those from spontaneous initiative. Emotional expression is lacking, or distorted and exaggerated in the hyperkinetic attack. In reactive movements (on request) the patient fails, may be unable with the best intention; the innervation fails him, or it is slow or altered, or it flows into the muscles of predilection, into a real tonic attack. If the antagonist is already in tension, it may become even more tense, without, however, leading to decided opposition movements. Real negativism involves volitional opposition. The inability to move is evidently primary. At times the inability is explosively overcome by a sudden crude effort, at times with clear sidetracking. In all this, the momentary state of tension, or the complexity of the movement called for, seem to be without importance, in contrast to the case of cortical apraxia. Kleist also excludes a relation to transcortical or ideatory apraxia. He sees as the essential trait disorders of innervation, evidently influenced by certain psychic factors (the initiative movements better than those on request, etc.).

In discussing the speechlessness, Kleist again distinguishes between mutism and really psychomotor loss. The latter resembles most an insufficiency of effort. He sees that spontaneous speech is easier than speech on request; it comes more readily towards the nurse than towards the physician, and more readily in indifferent matters. But some of the utterances and efforts show peculiar difficulties and distortions (p. 64) in the process of enacting the speech movement, a disorder fundamentally different from what we see in aphasia. Kleist's result is: The psychomotor disorders in the akinetic states are innervatory disorders partly conditioned by psychic factors.

The known innervatory disorders (ataxia, cortical palsy, cortical and transcortical apraxia and mind palsy) are essentially unilateral or monoplegic. What organ could combine the bilateral peculiarly selected and so variously affected mechanisms? Kleist points to the cerebello-frontal apparatus which is superimposed upon the proprio-receptive cerebellar system. This mechanism also has mainly tonic and asthenic symptoms, involves mainly trunk and head, is known to affect

speech, and in tumors of the left frontal lobe Oppenheim has described a difficulty of speech similar to the psychomotor difficulty.¹ There is further the kinship between chorea and hyperkinetic motility state which Kleist now proceeds to describe. Hypotonia and trunk-ataxia point to the cerebellothalamic frontal path. The tonic symptoms, however, are assigned to the fronto-pontine path. Even akinesia and asthenia belong to disorders in the cerebello-frontal system. Especially the deficiency of mimic movements in thalamic lesion, in ponto-cerebellar atrophy, paralysis agitans, pseudobulbar states, and even chorea is adduced. It is, however, obvious that the symptomatology of the motility-psychoses is more and in other respects less than the fronto-cerebellar apparatus explains.

Turning to the *psychic* condition of the psychomotor motility disorders, Kleist first refuses the simple motor explanations of Meynert, Lehmann and Schüle, and Wernicke's attempt to make them appear as a special form of transcortical apraxia and aphasia, further the explanation from delusions and hallucinations of the muscular sense (Meynert and Cramer), Kraepelin's disorder of volition, Sommer's reduction to a mental disorder similar to that of hypnosis, and R. Vogt's 'diffuse cortical dissociation.' He claims that it will not do to trace one unknown factor to other unknown quantities.

Kleist's first point is that a 'feeling of great exertion' works as a hindrance, or a sensation of weakness or fatigue leads to odd efforts in some cases; on the other hand an anæsthesia for fatigue might play a rôle in *flexibilitas cerea*. Peculiar complaints of dizziness, of floating, of the bed going up and down, sensation of lightness of weight or change of size of the body or limbs, feeling about the heart and internal organs with explanatory delusions would seem to play a decided rôle. The surprising ability of one patient to measure an attendant for a suit, at a time when he could not get up or shake hands with the physician, is attributed to its being a habitual occupation with him. Negativism is altogether assigned to pathological affects. Anxiety is given great prominence; shame accounts for some akinesia. Certainly the difference of the reaction towards mere attendants and physicians and the differences according to content of the question, the peculiar reactions at the very moment when the physician wants to leave, all show that it is not merely the fluctuation in the intensity of the disease-process that account for the changes in the reactions. Yet the influence of preoccupation, indifference, or disorders of affect by themselves, do not explain the picture altogether. Kleist then takes up the

¹ *Arch. f. Psych.*, XXI., 1890, cases I., IV., and VII.

organic sensations and the attention is at once turned into the issue of localization: the frontal lobe has centers for the somatapsyche, the anus, the pupils, the heart (?), respiration (?), the regulation of temperature, etc.—and a disorder which affects the cerebello-frontal mechanism also involves these structures so important for the attention, the sensation of fatigue, the emotional responsiveness and the feeling of affective responses, etc. A disorder of the elaboration of the organic sensations, of the feelings of strain and fatigue and the disorder of feelings, affects and attention contributes to the psychomotor symptoms.

Kleist sums up his theory as follows: The disease-process does not attack the cerebello-frontal system exclusively, but also (and perhaps chiefly) transcortical connections between it and the other brain systems: (1) between it and the motor area proper, or (2) between the whole frontal-motor area and the rest of the brain. He prefers the latter alternative, and describes the lighter interruptions and their probable effects (akinesia with *flexibilitas*) and the severer forms (psychomotor apraxia and aphasia). Cataleptic disorders are also recorded with lesions of the posterior fields of the hemisphere; but in these cases frontal affections were not excluded.

A further volume to be reviewed later treats of the even more complex and perplexing hyperkinetic phases of the motility-psychoses. One cannot help but admire the consistency in the mustering of facts and theories towards the one end, that of an anatomical demonstration of the mechanism. The great gap in the whole argument is the absence of anatomical demonstration of lesions, and the highly hypothetical nature of the assumptions where the mental symptoms are approached. As a chapter in the exploration of the psychomotor field the work is capital; as a chapter in the dynamic interpretation of the motility psychoses and their essential principle, it has next to nothing to offer.

The fact that an anatomical substratum for some of the symptoms can be pointed out, does not speak against the likelihood that the interpretation will be chiefly from the point of view of collision of function to be expressed in non-anatomical and probably psychological terms. For any psycho-biological consideration of the motor functions Kleist's work must, however, command the attention of any investigator.

A. M.

PSYCHOPATHOLOGY.

Traité International de Psychologie Pathologique. Directeur: DR. A. MARIE. Comité de rédaction: Bechterew, Clouston, Grasset, Lugaro, Magnan, Pilcz, Raymond, Ziehen. Tome premier: Psychopathologie générale. Paris, Alcan, 1910. Pp. viii + 1028. Fr. 25.

Marie aims to present to us an international inventory of the data of psychopathology accumulated in the more than 100 years since the great revolution of the Tukes, Pinel, Dacquín and Chiaruggi. This would be a daring enterprise. The first one of the three volumes shows that we must not expect more than a series of monographs written in conformity to a general plan, as far as psychiatry will permit of such treatment to-day.

Grasset opens the work with a clean-cut discussion of the relations of psychiatry and neurology (the unity of human neurobiology, its general methods and the importance of their social applications); he insists on some of his well known schematic distinctions, such as the difference between psychic (including the subconscious) and mental (concerning the 'psychisme supérieur'), and emphasizes the psychopathology of the nervous system or neurobiology as the common ground of psychiatry and neurology, with a clearly functional starting-point.

Del Greco's critical sketch of the history of 'mental medicine' is really an essay of broadly philosophical pretensions covering the problem from an analytical rather than historical standpoint, first the evolution of science as a principle (with an account of the relative merits of Cesalpino and Harvey in the discovery of the circulation of the blood) and discussion of Comte's law, and then brief sketches of the evolution of medical thought and work, mostly grouped so as to converge towards an epistemology of medicine as a science and its possible philosophical problems. It does not give as clear a sizing up of the various movements in psychiatry; and over its breadth and digressions, it fails to bring out the main interests of to-day: the conflicts about the ways in which psychological data are supposed to be used in psychopathology, as merely descriptive material or in part as dynamic factors. The article refers extensively to other studies of Del Greco; but the pertinent discussions in previous years of this BULLETIN have not reached his attention and their direct specific issues are but vaguely touched by the encyclopædic discussion of this article. His perspectives are historical and contemplative, not historical and pointing out the direction of special moving interests.

From this article, the book jumps directly into an essay on psychiatric anthropology by A. Marie, 190 pages of studies of stigmata found in the somatic examination, with an extensive but incomplete bibliography, followed by a study of the fissures and convolutions of the brain of the insane by Mingazzini (pp. 283-296), and one on the chemistry of the cerebral substance by A. Marie (pp. 297-314) — ignoring Koch's work on the brain in *Dementia præcox*. All these 219 pages mean very little; they are raw material. Anyone who has followed the studies on the series of measurements of palates by Channing and their interpretation under the guidance of Boas must regret that Marie does not seem to know of the net result in this well-plowed field; and how much less can we judge of the relevancy of the other *curiosa*.

The next chapter delves into the effects of the skin, the congenital and acquired anomalies of the respiratory and digestive functions, the kidney and autotoxic retentions, the circulation and blood and the various glands (pp. 315-429) and to this is strung Levaditi's brief article on the syphilitic etiology of brain-disease.

The eighth chapter deals with pathological anatomy, by no less than six contributors (pp. 459-708).

Then we are abruptly carried into the evolution of the human mind during puberty, by Marro, an interesting summary and extension of the author's larger work, inevitably leading us on very special ground and discussions of disease-forms and treatment which the reader is not prepared to discuss from the antecedents of the book. It might well be placed at the end of the second volume. This chapter is a monograph on the psychoses of puberty without any contact with the issues of to-day's discussions of *Dementia præcox*. It gives one a feeling that this word is large after all and the ways to see and not to see things many. As a picture of Marro's standpoint it is, however, excellent.

The rest of the volume (pp. 815-1013) covers the clinical examination (41 pages, by Clouston), an essay on 'objective psychological examination' by Bechterew, the medico-pedagogical examination by Ferrari, and the medico-legal examination by Carrara.

Clouston's part is frankly disappointing. In these days of demand for methods of precision and precision of methods, the comfortable rambling comments on what an experienced practitioner may do and think on the admission of a patient, the excursions on the taking of pulse and temperature (p. 830), the cleansing bath and the advice to the nurses (p. 854) obviously cannot make up for the total lack of any definite helps for a systematic study and record.

Bechterew studies the neuro-psychic functions. Despairing of the applicability of the introspective record of patients, Bechterew studies the attitudes and activities 'irrespective of the subjective content' as 'objective psychology.'

He studies and records, for instance, the neuro-psychic tonus of the patient with the photograph of mimic expression, the sphymograph, pneumograph and plethysmograph. "The negative tonus has a small rapid pulse 'very depressible in hypotension,' and superficial respiration with prolonged expiration; the positive tonus, a full and slower pulse and deeper respiration with shorter expiration." The modifiability of these curves has been tested with electric stimuli and magnesium flashes, while a kinematogram records the mimic and a record the answers to questions. The next problem is the study of perception and reaction times, Ranschburg's methods, etc. He studies hallucinations with a questionnaire and a study of mimic; for the illusions, he uses the common experiments for suggestibility. He then passes to questions on memory, remembrance, identification, chronometry of association, judgment, and attention and *Merkfähigkeit*; then to the motor reaction, phonation, speech and writing and drawing; next the personal or voluntary reactions, etc., gradually giving more space to the common-sense questionnaires. Taking it all in all Bechterew's chapter does in part what Clouston fails to give, and in part it gives suggestions but only imperfect descriptions for the arrangement of experiments of accuracy. The student would, however, still be helpless and floundering. Ferrari's examination of backward children at last brings a systematic account, but of course only for this limited type of cases. Carrara's chapter goes far beyond its sphere, into an excellent general discussion of criminality and insanity.

Taken altogether the book presents a series of essays of unequal value and poorly put together. The editorial work is complementary rather than supplementary. As may be expected in the international assemblage of names some of the names appear strangely altered. Thus T. S. Clouston enters as J. L. Clouston, and the noted German Binswanger emerges from the Italian original as Binssvauger. One might well exclaim with the surprised son before a picture palmed off on him as his father's: *Mein seliger Vater, wie hast Du Dich verändert!* Notwithstanding all the criticism, it is hoped that a second edition may give an opportunity to put the many good features into better perspective.

The second volume, dealing more definitely with psychopathology, and the third volume, dealing with the treatment and the practical and administrative problems, are expected to come out in the course of this year.

A. M.

FARADIC STIMULATION.

A Note upon the Faradic Stimulation of the Postcentral Gyrus in Conscious Patients. HARVEY CUSHING. *Brain*, 1909, XXXII., 44-53.

Stimulation of sensory zones of the brain in unanæsthetized individuals are naturally rare. Cushing had recorded the stimulation of the temporal lobe giving the patient certain definite auditory impressions which he clearly distinguished from the buzz of the vibrator. He now reports two cases of stimulation of the posterior central gyri.

The first case had convulsions beginning in the right hand and face and preceded by a funny feeling (a gone sensation) in the arm, incipient choked disk, slight disturbance of pain and temperature sense over the postaxial surface of hand and forearm. The central area was exposed. Faradic stimulation of the motor area gave opposing movement of thumb and fingers, from points opposite to the unmistakable genu; somewhat higher up extension of the index finger, then flexion of the finger, of the wrist, of the elbow; below the genu contraction of side of face, then of palate and fauces with choking sensation, and further below the tongue and a subjective feeling of drawing of the jaw. All these stimulations gave the feeling of muscular contraction alone, just as in peripheral electric stimulation.

Stimulation of a limited area of the postcentral gyrus gave the feeling the patient had before the fits, and lower down a vague feeling of warmth in the arm but no sensation in the face, and absolutely no sensation from stimulation of any area in front or behind the central gyri.

A deep incision into the postcentral gyrus was not accompanied by any sensation; but it led to slight numbness of the ulnar side of the hand, and loss of postural sense of the little finger and some hypertonicity in the arm and hand and slight incoördination, especially on closure of the eyes. No stocking or glove type of anaesthesia.

In a second case also with Jacksonian fits, beginning with a stinging sensation 'like an electric shock' running down between the little and ring fingers, followed by their extension and abduction, and then a drawing of the arm, electric stimulation of the middle of the posterior central gyrus gave a sensation in the right index 'as though some one had stroked or touched the finger'; further down the same feeling occurred on the back of the hand. Stimulation of the corresponding motor area flexed the thumb, without any cutaneous or central sensation. No other regions responded with sensations. From Horsley's vocal-cord center a fit was called forth and the examination was broken

off. An irremovable lesion of the postcentral gyrus was found higher up.

Only the second case reacted with sensations different from those of the aura.

A. M.

HYSTERIA.

La définition de l'hystérie. ED. CLAPARÈDE. Archives de Psychologie, VII., 167-193.

There is much confusion between the empirical definition and the theory of the nature of hysteria.

Neither suggestion nor auto-suggestion constitute sufficient explanation of hysteria. In regard to the former we have a choice of three hypotheses. (1) The exaggerated suggestibility is dependent on the constitutional cerebro-mental trouble. (2) The hypersuggestibility comes from the lessening of the personality, the non-assimilation by the ego of certain complexes. (3) The hypersuggestibility is an accelerated or exaggerated reaction. Merely an enumeration of these hypotheses will suffice to show that we say nothing when we say that hysteria is a case of hypersuggestibility, for we have the same problem to work over again. The same statement may be as truly said of auto-suggestion.

The interrelations of the troubles which constitute the hysterical character may be shown by the following scheme:

Primitive Troubles: Constitutional or acquired state characterized by a tendency to exaggeration of reaction of defense.

Exaggerated reactions.

Secondary Troubles:	Inhibitive.	Positive.
	Trembling, anæsthesia, paralysis, amnesia, etc.	Vomiting, convulsive cries, cutaneous troubles, etc.
Tertiary Troubles:	Breaking of the personality to the profit of the sub-conscious.	
Quaternary Troubles:	Augmentation of suggestibility.	
Quinary Troubles:	Suggested troubles.	

This scheme shows the extreme complication of hysterical manifestations and the impossibility of attempting to define hysteria before we know its nature.

M. L. BILLINGS.

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BOOKS RECEIVED DURING MARCH.

- The Principles of Pragmatism.* H. HEATH BAWDEN. Boston and New York: Houghton Mifflin Co., 1910. Pp. viii + 364. \$1.50 net.
- The Duty of Altruism.* RAY MADDING McCONNELL. New York: Macmillan Co., 1910. Pp. 255. \$1.50 net.
- Zweierlei Denken: Ein Beitrag zur Physiologie des Denkens.* A. BÜTTNER. Leipzig: Barth, 1910. Pp. 32. Mk. 1.
- Die Stelle des Bewusstseins in der Natur.* JULIUS PIKLER. Leipzig: Barth, 1910. Pp. 35. Mk. 1.
- Die Sprachstämme des Erdkreises.* F. N. FINCK. Leipzig: Teubner, 1909. Pp. viii + 143. Mk. 1.25.
- Die Haupttypen des Sprachbaus.* F. N. FINCK. Leipzig: Teubner, 1910. Pp. vi + 156. Mk. 1.25.
- Die Mechanik des Geisteslebens.* M. VERWORN. (2te Aufl.) Leipzig: Teubner, 1910. Pp. 114. Mk. 1.25.
- The Dualism of Fact and Idea in its Social Implications.* ERNEST LYNN TALBERT. (Philos. Stud., Univ. of Chicago, No. 2.) Chicago: Univ. of Chicago Press, 1910. Pp. 52. 53 c. post-paid.
- The Sexual Life of Woman in its Physiological, Pathological and Hygienic Aspects.* E. HEINRICH KISCH. Trans. by M. EDEN PAUL. New York: Rebman Co., no date. Pp. xii + 686. \$5.
- Die Eigenart der Natur und der Eigensinn des Monismus.* PAUL VOLKMANN. Leipzig and Berlin: Teubner, 1910. Pp. 34. Mk. 1.
- The Choctaw of Bayou Lacombe, St. Tammany Parish, Louisiana.* DAVID I. BUSHNELL, JR. (Bureau of Amer. Ethnol., Bulletin 48.) Washington: Gov. Printing Off., 1909. Pp. ix + 37 (22 plates).
- Liberté de conscience et liberté de science.* LUIGI LUZZATI. Trad. par J. CHAMARD. Paris: Giard and Brière, 1910. Pp. 453. Fr. 10.
- L'illusion paradoxale et le seuil de Weber.* MARCEL FOUCAULT. Montpellier: Coulet; Paris: Masson, 1910. Pp. 213. Fr. 4.

- Die Einfühlung.* ANTONIN PRANDTL. Leipzig: Barth, 1910.
Pp. 121. Mk. 2.40.
- Mental Discipline and Educational Values.* W. H. HECK. New
York: John Lane Co., 1909. Pp. 147.
- Die taktile Schätzung von ausgefüllten und leeren Strecken.*
HELEN DODD COOK. (Sonderabd. aus Arch. f. d. ges. Psychol.)
Leipzig: Engelmann, 1910. Pp. 130.

NOTES AND NEWS.

THE second annual meeting of the Minnesota Psychological Conference was held at the University of Minnesota on April 1. At the morning session several papers on retardation were presented, and a movement was started to secure uniform statistics on retardation throughout the state. The afternoon session included papers and discussion on the elementary course in psychology and a number of pedagogical topics.

THE Conference of Teachers of Psychology in Iowa met at Iowa City with the Western Philosophical Association in March, and a formal organization of the Conference was perfected. The governing body consists of Dean Carl E. Seashore of the State University of Iowa, President and Chairman, Professor Florence Richardson, Secretary and Treasurer, and Professor J. D. Stoopes of Grinnell College, who with the other two officers makes up the Executive Committee.

PROFESSOR J. H. TUFTS, of the University of Chicago, delivered a course of lectures on Modern Problems of Metaphysics and the Theory of Knowledge before the department of philosophy and psychology at the Johns Hopkins University, March 9 to 19.

PROFESSOR HUGO MÜNSTERBERG, of Harvard University, has been appointed exchange professor to lecture at Berlin during 1910-11.

THE department of psychology at the University of Minnesota has organized a free clinic for the study of mental development. Dr. H. H. Woodrow will have charge of the work, and Dr. J. P. Sedgwick, of the college of medicine, will superintend the physical diagnosis of the children studied.

J. A. BERGSTRÖM, professor of pedagogy at Stanford University, and until recently professor of pedagogy and director of the psychological laboratory at Indiana University, died on February 28.

PROFESSOR JAMES R. ANGELL, of the University of Chicago, has gone abroad, to remain till September.

PROFESSOR ERNST MEUMANN, of the University of Halle, has been called to the chair at Leipzig vacant through the death of Max Heinze.

DR. E. H. CAMERON, instructor in psychology in Yale University, has been advanced to the grade of assistant professor.

DR. F. S. BREED, at present engaged in work in comparative psychology at Harvard University, has been appointed instructor in psychology in Yale University.

H. FOSTER ADAMS, A.B., Fellow in the University of Chicago, has been appointed to an instructorship in psychology in the University of Kansas.

THE present number of the BULLETIN, dealing especially with psychopathology, has been prepared under the editorial care of Dr. Adolf Meyer.

THE following are taken from the press:

PROFESSOR VIVIAN A. C. HENMON, of the University of Colorado, has been elected associate professor of educational psychology in the University of Wisconsin.

DR. ROBERT M. OGDEN has been promoted to a professorship of philosophy and psychology in the University of Tennessee.

EDITORIAL ANNOUNCEMENT. — Professor Arthur H. Pierce, of Smith College, has been chosen to the editorial staff of these publications. Professor Pierce will assume editorial charge of the PSYCHOLOGICAL BULLETIN in September.

Until September 1, MSS., books for review, and correspondence relating to the BULLETIN and INDEX should be addressed to Professor H. C. Warren, Princeton, N. J.

MSS. and correspondence relating to the MONOGRAPHS (as well as the REVIEW) should be addressed to Professor J. B. Watson, Johns Hopkins University, Baltimore, Md., during Professor Angell's absence abroad.

With the September issue, the BULLETIN will begin the publication of a series of systematic reports of recent contributions to general psychology. The field will be divided into a number of topics, several of which will be reviewed in a single issue. The 'special numbers' of the BULLETIN, devoted to other branches of psychology, will alternate with the numbers containing these reports.

